

Title (en)
HIGH-PRESSURE SYNTHESIS OF DIAMOND

Title (de)
HOCHDRUCKSYNTHESE VON DIAMANTEN

Title (fr)
SYNTHÈSE DE DIAMANT À HAUTE PRESSION

Publication
EP 3646944 A1 20200506 (EN)

Application
EP 18203509 A 20181030

Priority
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Abstract (en)
Disclosed herein are a device and a method for synthesizing diamond. The device comprises an inner capsule containing a buffer medium for stabilizing a hydrogen fugacity, the inner capsule consisting of a hydrogen-permeable material; an outer capsule enclosing the inner capsule, wherein the outer capsule contains a reaction medium containing reactants for a chemical reaction yielding diamond; and a pressure medium surrounding the outer capsule, wherein the pressure medium is configured to transfer a pressure applied to an outer surface of the pressure medium to an outer surface of the outer capsule and wherein the pressure medium is further configured to inhibit hydrogen exchange through the pressure medium at a temperature of the pressure medium and a pressure applied to the pressure medium that are required to transform the reaction medium to a supercritical phase.

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B01J 3/06 (2006.01)

CPC (source: EP)
B01J 3/065 (2013.01); **B01J 2203/0655** (2013.01)

Citation (applicant)
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